

AMENDMENT TO THE CLAIMS

The following claim set replaces all prior versions, and listings, of claims in the application:

1. (currently amended) A method of treating pulp such as fiber suspensions of the paper and wood processing industry, said method comprising the steps of:
 - introducing a low consistency pulp into a pre-thickener apparatus having a filter surface and a cleaning member,
 - removing liquid from the pulp in said pre-thickener apparatus essentially by means of the effect of the feeding pressure of the pre-thickener apparatus,
 - allowing a layer of thickened pulp to be formed on the filter surface of the pre-thickener apparatus,
 - wiping said layer of thickened pulp off the filter surface of said pre-thickener apparatus with the cleaning member, and
 - discharging the thickened pulp and filtrate from said pre-thickener apparatus, and wherein said method further comprises the steps of:
 - pushing the layer of thickened pulp by said cleaning member along said filter surface to the discharge end of the pre-thickener apparatus in essentially an axial direction, while simultaneously
 - allowing the essentially non-thickened pulp to flow through the apparatus from the feeding end to the discharge end via the space between said cleaning member and a shaft of the apparatus, and
 - guiding a part of said essentially non-thickened pulp flow to a portion of the filter surface being wiped by the cleaning member;
- regulating the flow speed of the pulp in the pre-thickener apparatus by means of valves for the filtrate and the thickened pulp; and

controlling the thickening of the pulp in response to input power or input torque of the cleaning member or in response to a pressure difference prevailing over the filter surface.

2. (previously presented) A method according to claim 1, comprising supplying pulp to said pre-thickener apparatus from a screen, the screening consistency of which is about 2 – 4 %.

3. (previously presented) A method according to claim 1, wherein the pulp thickened by the pre-thickener apparatus is taken into a filter, the feeding consistency of which is 3 – 6 %.

4. (previously presented) A method according to claim 2, wherein between the screen and the filter the consistency of the pulp is raised by said pre-thickener by 1 – 4 %.

5. (previously presented) A method according to claim 1, comprising rotating the cleaning member at a rotational speed sufficient to create a flow speed for the thickened layer of pulp of less than 3 m/s towards the discharge end of the pre-thickener apparatus.

6. (previously presented) A method according to claim 5, wherein said flow speed of the thickened layer of pulp is between 0.2-1.0 m/s, preferably about 0.5 m/s.

7. (previously presented) A method according to claim 1, wherein the cleaning member comprises a rotatable screw, and wherein the feeding speed of the screw and the flow speed of the non-thickened pulp are essentially the same at the discharge end of the apparatus.

8. (previously presented) A method according to claim 1, further comprising using a pump so as to create the feeding pressure of the pre-thickener apparatus.

9. (currently amended) A method according to claim 1, ~~further comprising~~
wherein said step of controlling the thickening of the pulp further comprises by
regulating the flow of incoming pulp, filtrate and/or thickened pulp with valves.

10. (cancelled)

11. (previously presented) A method according to claim 9, further comprising
regulating the consistency of the thickened pulp to a desired value by changing a flow
amount ratio between the thickened pulp and the filtrate.

12. (previously presented) A method according to claim 9, further comprising
regulating the consistency of the thickened pulp to a desired value by changing a flow
amount ratio between the low consistency pulp to be thickened and the filtrate.

13. (cancelled)

14. (previously presented) A method according to claim 9, wherein said step of
controlling the thickening of the pulp comprises is practiced by maintaining a constant
pressure difference over the filter surface.

15. (currently amended) A method according to claim 9, wherein said step of
controlling the thickening of the pulp further comprises controlling the thickening of the
pulp in response to a process signal obtained ~~is practiced on the basis of an impulse~~
from a previous or later process stage.

16. (previously presented) A method according to claim 1, wherein said step of
controlling the thickening of the pulp ~~is practiced by~~ further comprises changing the
rotational speed of the cleaning member.

17. (previously presented) A method according to claim 1, further comprising
using said filtrate for dilution in a previous process stage.

18. (previously presented) A method according to claim 1, further comprising using said filtrate for dilution in the same process stage.

19. (previously presented) A method according to claim 1, further comprising separating fibers from said filtrate by a fiber separating means prior to reusing the filtrate.

20 - 25. (canceled)

26. (new) A method of treating pulp such as fiber suspensions of the paper and wood processing industry, said method comprising the steps of:

introducing a low consistency pulp into a pre-thickener apparatus having a filter surface and a cleaning member,
removing liquid from the pulp in said pre-thickener apparatus essentially by means of the effect of the feeding pressure of the pre-thickener apparatus,
allowing a layer of thickened pulp to be formed on the filter surface of the pre-thickener apparatus,
wiping said layer of thickened pulp off the filter surface of said pre-thickener apparatus with the cleaning member, and
discharging the thickened pulp and filtrate from said pre-thickener apparatus, and wherein said method further comprises the steps of;
pushing the layer of thickened pulp by said cleaning member along said filter surface to the discharge end of the pre-thickener apparatus in essentially an axial direction, while simultaneously
allowing the essentially non-thickened pulp to flow through the apparatus from the feeding end to the discharge end via the space between said cleaning member and a shaft of the apparatus,
guiding a part of said essentially non-thickened pulp flow to a portion of the filter surface being wiped by the cleaning member;

controlling the thickening of the pulp by regulating the flow of incoming pulp, filtrate and/or thickened pulp with valves; and
controlling the valves in response to input power or input torque of the cleaning member or in response to a pressure difference prevailing over the filter surface or in response to a process signal obtained from a previous or later process stage.